

REMARKS

Claims 1-20 were pending in this application when last examined. Claims 1-8 and 11-20 were rejected. Claims 9 and 10 were objected to, but they would be allowable if rewritten in independent form including all limitations of the base claim and any intervening claims.

Claims 3-5, 15, 17, 19 & 20 have been cancelled herein, and claims 1, 6, 7, 12, 14, 16, and 18 have been amended herein. New claim 21 is added. No new matter is added. Accordingly, claims 1, 6-14, 16, 18, and 21 are currently pending.

The drawings have been objected to under 37 CFR § 1.83(a). The label of “prior art” has been added to figures 1a-1h, therefore it is requested that this objection be withdrawn.

Claim 12 has been objected to because of informalities. These informalities have been corrected herein, and it is therefore requested that this objection be withdrawn.

Claims 1-8, 11-12, and 17-18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,265,757 B1 to Brady et al. (hereinafter “Brady”) in view of U.S. Patent No. 6,627,510 B1 to Evans et al. (hereinafter “Evans”). Claims 14-15 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Brady. Claims 13, 16, 19 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Brady in view of Evans and further in view of U.S. Patent No. 5,689,140 to Shoda (hereinafter “Shoda”).

Claim 1 is amended to specifically recite “etching a second layer of the layer stack ... wherein the second layer is only partially etched so that the second layer remains closed at locations corresponding to the smaller openings.” As noted in the Office Action at the third full paragraph on page 4, Brady “fails to use a two-layer stack of different materials on the substrate,” while Evans teaches only etching two layers “down through to the substrate.” Since the references of record neither teach nor imply the limitations of amended claim 1, which include etching two layers “so that the second layer remains closed,” Applicants respectfully assert that amended claim 1 is allowable over the references of record.

Since claims 2, 6-13, and 21 also depended from amended claim 1, Applicants respectfully assert that these claims are allowable at least for the reasons cited above with respect to amended claim 1.

The Office Action stated that claims 9 and 10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Since amended claim 1 is the base claim from which claims 9 and 10 depend, Applicants respectfully assert that claims 9 and 10 are allowable at least for the reasons cited above for amended claim 1 without regard to the limitations contained in any intervening claims.

Claim 14 is amended to specifically recite an algebraic formula for calculating the width of “the larger features for forming the deep structures.” The limitations of amended claim 14 are similar to those cited in the Office Action at page 7 under Allowable Subject Matter with respect to claim 9. Applicants respectfully assert that amended claim 14 is allowable over the references of record at least for these reasons.

Applicants further respectfully assert that claim 16, which depends from claim 14, is allowable at least for the reasons cited with respect to claim 14.

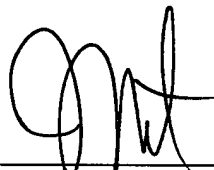
Claim 18 is amended to specifically recite “depositing a metallic material in the smaller and larger structures; and removing excess material not residing substantially within the smaller and larger structures.” Applicants respectfully assert that the references of record neither teach nor imply the limitations of amended claim 18, and that amended claim 18 is, therefore, allowable.

New claim 21 is added to depend from claim 1 and to add further limitations. Claim 21 specifically recites, “selectively etching the substrate to a desired depth of the deep structures” and to add further limitations. Since the cited references neither teach nor imply the limitations of new claim 21, Applicants respectfully assert that new claim 21 is allowable over the references of record at least for these reasons.

In view of the above, Applicants respectfully submit that the application is in condition for allowance and request that the Examiner pass the case to issuance. If the Examiner should have any questions, Applicants request that the Examiner contact Applicants' attorney at the address below. No fee is believed due in connection with this filing. However, in the event that there are any fees due, please charge the same, or credit any overpayment, to Deposit Account No. 50-1065.

Respectfully submitted,

August 4, 2005
Date



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